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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,015	01/22/2002	Hisashi Tsubata	Q66605	7652

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EXAMINER

KOPPIKAR, VIVEK D

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,015

Applicant(s)

TSUBATA ET AL.

Examiner

Vivek D Koppikar

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 5-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-12 in Paper No. 3 is acknowledged. Claims 13-16 are withdrawn from further consideration.

Claim Objections

2. Claims 1-10 are objected to because of the following informalities: In line 3 of Claim 1, line 4 of Claim 4, line 7 of Claim 5, line 8 of Claim 6, line 7 of Claim 7, and line 7 of Claim 8 "pattern" should be "surface." Appropriate correction is required.

3. Claims 4-8 are objected to because of the following informalities: The wording in lines 3-4 of Claim 4 "a rough surface is formed on the surface of the protrusion portions of the uneven pattern" is awkward and confusing. It is not clear whether the applicants mean to specify a rough surface on a magnetic transfer medium or a rough surface present on the protrusions. The examiner takes the position that a rough surface is present on the protrusions and will examine the claims accordingly.

4. Claim 7 is objected to because of the following informalities: It is not clear to the examiner what limitation the phrase "said rough surface is formed as a surface roughness, the formation of which is controlled by the formation conditions of the pliable magnetic layer" is defining. Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Japanese Patent Number 2000-163730 (hereafter referred to as JP'730).

JP'730 teaches a magnetic recording medium with protrusions present on the surface of the medium. The areas around the protrusions are considered depressions (Translated Abstract and Figure 2). The depressions are not completely surrounded by protrusions.

7. Claims 11-12 are rejected under 35 U.S.C. 102(a) as being anticipated by JP '730.

In JP'730 the projections have a height of 20 to 100 nm (Translated Abstract) so the channels of the uneven pattern are of a depth of at least 20 to 100 nm.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 4 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Number 2001-49007 (hereafter referred to as JP '007).

JP'007 teaches a magnetic transfer medium with rough protrusions (Translated Abstract). The diameter (depth) of the protrusions are 4.5 nanometers or more.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'007 as applied to Claim 4.

JP'007 teaches a magnetic recording medium with an uneven pattern (protrusions) on the surface. A magnetic layer formed of in part of polyamide film (pliable) is present on the surface of the medium. The examiner takes the position that the process limitations specifying the method used to form the rough surface are not patentably distinct, absent a showing of unexpected results, since JP'007 teaches rough protrusions.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'007 as applied to Claim 4 above and in further view of US Patent Number 5,324,582 to Goto.

JP'007 does not teach that the protrusions are coated with or consist of granular material.

Goto teaches a magnetic recording medium with protrusions present on the medium. The protrusions are made from spherical grains. Forming the protrusions from grains allows better control of the number of protrusions that are formed on the magnetic medium (Col. 5, Ln. 18-37). At the time of the invention, one of ordinary skill in the art would have been motivated to form the protrusions in JP'007 out of granular material with the expectation of achieving better control of the number of protrusions on the surface of the medium as recited in Goto.

Allowable Subject Matter

13. Claim 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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14. The prior art of record does not teach protrusions that have a narrower width than the track width.

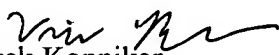
JP 61-230606 (hereafter referred to as JP'606) teaches a magnetic head with protrusions. The protrusions have a width smaller than that of a track. However the protrusions in JP'606 are like depressions as compared to the instant invention. In the instant invention the depressions are located below the top surface of the substrate while the protrusions are located above the top surface of the substrate.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Vivek Koppikar** whose telephone number is **(703) 305-6618**. The examiner can normally be reached on Monday-Friday from 8 AM to 5 PM, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones, can be reached at (703) 308-3822. The fax phone numbers for the organization where this application or proceeding are assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications. The examiner's desktop fax number is (703) 746-3983.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Vivek Koppikar

5/5/03


DEBORAH JONES
SUPERVISORY PATENT EXAMINER